

WE CLAIM:

1. A system for wireless communication, comprising:
 - (a) a first gateway for connecting to the Internet;
 - (b) a router for processing and transmitting internet protocols connected to the first gateway;
 - (c) a second gateway for connecting to a public switched phone network;
 - (d) a plurality of access points connected to the first gateway and the second gateway;
 - (e) a plurality of wireless devices associated with the plurality of access points via a wireless medium; and
 - (f) an internet protocol telephone connected to the first gateway and the second gateway equipped to receive multiple internet protocol addresses and to determine the intended recipient of an incoming call based on the internet protocol address.
2. The system as in claim 1, further comprising:
 - (g) a plurality of individuals, wherein each individual wears a tag that can uniquely identify the identity and location of the individual using radio frequency identification; and wherein the internet protocol telephone routes an incoming call to the intended recipient based on the internet protocol address of the incoming call and the location of the intended recipient using the tag of the intended recipient to determine the identity and location of the intended recipient.
3. The system of claim 2, wherein the incoming call is routed to the wireless device of the intended recipient via the plurality of access points.

4. A multi-tier system for digital radio communication, comprising:
 - a first-tier base station comprising a first radio transceiver operating in accordance with a first communication protocol, the first-tier base station connected to a local area network;
 - a second-tier base station comprising a second radio transceiver operating in accordance with a second communication protocol independent of the first communication protocol;
 - a combination unit that is wirelessly connected to the first-tier base station through the first radio transceiver and wirelessly connected to the second-tier base station through the second radio transceiver;

wherein the first communications protocol is of a higher speed and has a longer range than the second communications protocol.
5. The system as in claim 4, wherein the combination unit includes ports for communicating via infrared wireless transmission, facsimile transmission, and transmission using a modem.
6. The system as in claim 4, further comprising a plurality of wireless devices, each of which incorporates a second-tier base station.
7. A method for coordinating communication, comprising:
 - transmitting via a first communications protocol using a wireless medium, wherein the first communications protocol utilizes frequency hopping to transmit a message over a discrete number of frequency channels within a frequency band;
 - transmitting via a second communications protocol to communicate using a wireless medium, wherein the second communications protocol utilizes frequency hopping to transmit a message over a discrete number of frequency channels within the frequency band, wherein the

second communications protocol operates at a lower power level than the first communications protocol;

prior to the transmitting via the second communications protocol, coordinating with a transmitting device transmitting via the first communication protocol to determine the one or more discrete number of frequency channels that will not be used by the first communications protocol and coordinating the transmitting via the second communications protocol using only the one or more discrete number of frequency channels that are not used by the first communications protocol.

8. The method as in claim 7, wherein the frequency band is the 2.4 GHz ISM band.
9. The method as in claim 7, wherein the first communications protocol operates at a power level of about 100 mW.
10. The method as in claim 7, wherein the second communications protocol operates at a power level of about 1 mW.
11. The method as in claim 7, wherein the coordinating with a transmitting device transmitting via the first communication protocol is accomplished using an access point
12. The method as in claim 7, wherein the one or more discrete number of frequency channels that are not be used by the first communications protocol are frequency channels on either end of the frequency band.
13. The method as in claim 7, wherein the one or more discrete number of frequency channels that are not be used by the first communications protocol are the two frequency channels on either end of the frequency band.
14. The method as in claim 7, wherein the first communication protocol is the IEEE 802.11

protocol.

15. A system for wireless communication, comprising:

 a first-tier base station comprising a first radio transceiver operating in accordance with a first communication protocol, the first-tier base station connected to a local area network;

 a second-tier base station comprising a second radio transceiver operating in accordance with a second communication protocol independent of the first communication protocol;

 a first-tier remote unit wirelessly connected to the first-tier base station through the first radio transceiver;

 a second-tier remote unit wirelessly connected to the second-tier base station through the second radio transceiver;

 wherein the first-tier remote unit connects to the first-tier base station via a first communications protocol using a wireless medium, wherein the first communications protocol utilizes frequency hopping to transmit a message over a discrete number of frequency channels within a frequency band;

 wherein the second-tier remote unit connects to the second-tier base station via a second communications protocol using a wireless medium, wherein the second communications protocol utilizes frequency hopping to transmit a message over a discrete number of frequency channels within a frequency band, wherein the second communications protocol operates at a lower power level than the first communications protocol;

 and wherein the first-tier base station and the second-tier base station coordinate to determine the one or more discrete number of frequency channels that will not be used by the first communications protocol and direct the second communications protocol to use only the

one or more discrete number of frequency channels that are not used by the first communications protocol.

16. The system as in claim 15, wherein the frequency band is the 2.4 GHz ISM band.
17. The system as in claim 15, wherein the first communications protocol operates at a power level of about 100 mW.
18. The system as in claim 15, wherein the second communications protocol operates at a power level of about 1 mW.
19. The system as in claim 15, wherein the one or more discrete number of frequency channels that are not be used by the first communications protocol are frequency channels on either end of the frequency band.
20. The system as in claim 15, wherein the one or more discrete number of frequency channels that are not be used by the first communications protocol are the two frequency channels on either end of the frequency band.
21. The system as in claim 15, wherein the second communications protocol is used to communicate among at least two moving vehicles.
22. The system as in claim 15, wherein the second communications protocol is used to identify a vehicle using a database of vehicle information.
23. The system as in claim 15, wherein the second communications protocol is used to identify the identity and location of a missing vehicle.
24. The system as in claim 15, wherein the second communications protocol is used to obtain diagnostic information for a vehicle.
25. The system as in claim 15, wherein the second communications protocol is used among

at least two vehicles to prevent collisions between the at least two vehicles.

26. The system as in claim 15, wherein the second communications protocol is used to determine the weight and contents of a vehicle while the vehicle is in motion.

27. The system as in claim 15, wherein the second communications protocol is used to transmit data about a fixed location to a vehicle.

28. The system as in claim 15, wherein the second communications protocol is used by a vehicle to control traffic control signals.

29. The system as in claim 15, wherein the second communications protocol is used to informing a prospective customer that a taxicab is available.

30. The system as in claim 15, wherein the second communications protocol is used to determine the toll charged to a vehicle while the vehicle is in motion.

31. The system as in claim 15, wherein the first communications protocol is the IEEE 802.11 protocol.